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Nº. XVI.

A Disquisition on wool-bearing Animals, by Dr. JAMES ANDERSON, of North Britain, in a letter dated 6th December 1794.

LAST summer a Danish East-Indiaman put into Leith Roads on her return home. I went on board to see what curiosities she had. I there found a very fine sheep, which was covered with a close coat of thick short hair, very smooth and sleeked, like the coat of a well dressed horse; but the hairs rather stiffer, and thicker set on the skin; the colour a fine nut brown. This sheep I was told was bought at the island of Madagascar, and that all the sheep found at that place were of the same sort. Along with it, was another sheep brought from India at the same time, carrying a very close fleece of good wool; which clearly proves the influence of *breed* in over-ruling that of climate. I mention this last circumstance to obviate an idea that will readily occur of the influence of climate; an idea that prepossesses most men's minds, as it did my own for many years, so as to close their eyes against observing facts that fall often under their view.

This set my mind upon a more minute investigation of facts. I had, before that time, received from Russia some wool obtained from the common goat, of a softness that exceeds any thing of the wool kind I have ever seen, a small sample of a shawl made of which I send inclosed. I have since then seen some Angora goats' wool produced in Britain, which answers in every respect to the characteristics of *wool*, and not of hair. I have heard of the Angora rabbit also in Britain, but have not seen it as

yet ; but from the description, I have every reason to be satisfied that also is *wool* of a deep pile, and soft staple. I have likewise examined the fleeces of some European sheep which are abundant, but which answer the characteristics of *hair* rather than wool ; and the result of the whole is, as far as I at present see, as follows :—

First—That the sheep is not necessarily a wool-bearing animal, but that there are only certain *breeds* of it which can be thus distinguished ; and that, setting aside lesser distinctions, the different *breeds* of sheep may be arranged under the following classes :

1st. Those that carry short stiff hair only, and nothing that resembles wool, or that can be employed in manufactures for the same uses as wool ; the Madagascar sheep, and also the Boucharian sheep of Pallas, which I am now satisfied is of this sort.

2d. Those that carry wool properly so called.—The sheep of this sort are distinguished into a vast variety of breeds, including most of those reared in Europe and Asia. Some of these breeds have among their wool a quantity of a particular kind of opaque white hair, called *kemps* in England, and some have none of it at all ; and so in various proportions.

3d. Sheep that carry long hair, that may be shorn like wool, and may also be employed in coarser fabrics in the place of wool. Though this be in fact *hair*, yet it has been in general confounded with wool, and so denominated. Many breeds of European sheep may be referred to this class : As also the *Argali* of Asia. There seem to be two varieties of this class, viz. one that carries a fine kind of wool among the hair, as the *Argali* : the other that never has any of that fine wool among the hair ; as the European sheep of this class.

Second—There are other animals, some breeds of which, like the sheep, carry only close stiff hair, while
other

other breeds of them carry wool, or at least fleeces which admit of being shorn like the wool of sheep, and applied to the same purposes in arts. How many kinds of animals may be arranged under this head I know not, but the following seem to be undeniable.

1st. The dog.—1. Close stiff short haired : a variety of breeds common. 2. Long soft haired breeds : the English spaniel ; Newfoundland dog, &c. 3. Woolly breeds : a dog that is by no means rare in this place ; but the particular name I know not. It must be shorn every year, and yields a fleece as close as that of any sheep, and finer than many of them.

2d. The goat.—1. With short stiff hair common. 2. With long coarse shagged hair, common also. The goats of this sort have in general some very fine wool growing among the hair. The Thibet goat, from which the Indian shawl wool is obtained, belongs to this class : I had some of them in my hands very lately. 3. Goat carrying a fleece of wool : the Angora goat, some of which I lately saw in Lancashire.

3d. The ox (*Bos* tribe).—1. Close stiff haired kinds, common. N. B. I saw two days ago a bull of the *Zebu* kind, which had a very close pile of exceeding short hair, not above half an inch, but so thick set, that it appeared to be liker a deer-skin than any thing else. This animal has been in Britain several years. A cow of the same sort was brought over with him from India, which has had a bull and a cow-calf. There are also about a dozen calves by the same bull with common cows. The creature is extremely gentle, strong, stands well on his legs, which are clean and sinewy ; is in every respect handsome but for the hump on his shoulder. The greatest peculiarity is a deep dewlap, consisting of two loose skins only, that can be easily separated by the hand, like

a bag. The keeper says he can occasionally fill this with water, for his own use, but I saw it not so employed. 2. Long lank softer hairs also common in this country, especially among the highland cattle; some of these have manes like horses, which I have seen. 3. Softer and closer hair more resembling wool, but shorter; the Louisiana ox, according to the best description I can get of it. 4. Still longer, and more soft and silky, the fleece applied to various purposes in arts; the Sarluc, and Chitigong cow of India. 5. Longer and deeper fleece than almost any sheep; the musk ox of Hudson's Bay. A gentleman here who lived long in that country, assures me the fleece is as close as that of any sheep, that in some parts it is finer and softer than any wool he has seen, and about half a yard in length: But we are not yet sufficiently acquainted with the animal to speak with greater certainty.

The camel seems also to be referable to this head. Nor is it altogether certain if the hog, and many other animals might not be included under it; but I will not push the matter further at present.

The practical inference I would draw from these facts is this.—If different breeds of animals preserve in general their distinguishing peculiarities, when the breed is not contaminated by an intermixture with other breeds; of which the proofs are undeniable—and if a breed of the same kind of animal which carries wool can be found, which is equally good in other respects with another breed that carries no wool, (the sheep of Madagascar seemed to be in no respect superior to other wool-bearing sheep: nor is the goat of Angora, for aught that I can learn, in the least inferior in any respect to the common goat);—will it not be a matter of great economical concern to propagate as many of these wool-bearing breeds of animals

animals as possible, in preference to those of the short haired kinds? and is it not an object of great national concern to obtain as many varieties of these wool-bearing animals as can be got, in order to make accurate trials of their respective qualities, to ascertain in what respects they would prove beneficial or hurtful? We see by experience that the natives of Madagascar have reared no other sheep but the naked breed till this hour; and probably they believe either that there are no wool-bearing animals of that kind existing, or that they would not live in their country. We in Britain have never *till now* believed it was possible to have a wool-bearing goat; and even while I write supported by such facts, where is the man who would not laugh at me as a visionary, were I to talk of rearing wool-bearing cattle in place of the naked breeds we have hitherto propagated?

N°. XVII.

Later Communication by the Author on this Subject, with a Sample taken from the Fleece of a Sheep brought from Jamaica to England.

THIS sheep forms a distinct variety altogether different from any other I have ever seen. The hair is a substance sui generis, and is as different from the *kemps*, or stichet hair of Europe, as from the long tough hair of the Russian and other hairy breeds. The wool too is as different from other sheep's wool as the hair; it is *finer* than any other, not excepting the Shetland breed; though I would suspect it is scarcely so soft. This affords the most convincing proof that ever was given of the prevalence of *breed* above climate, and the